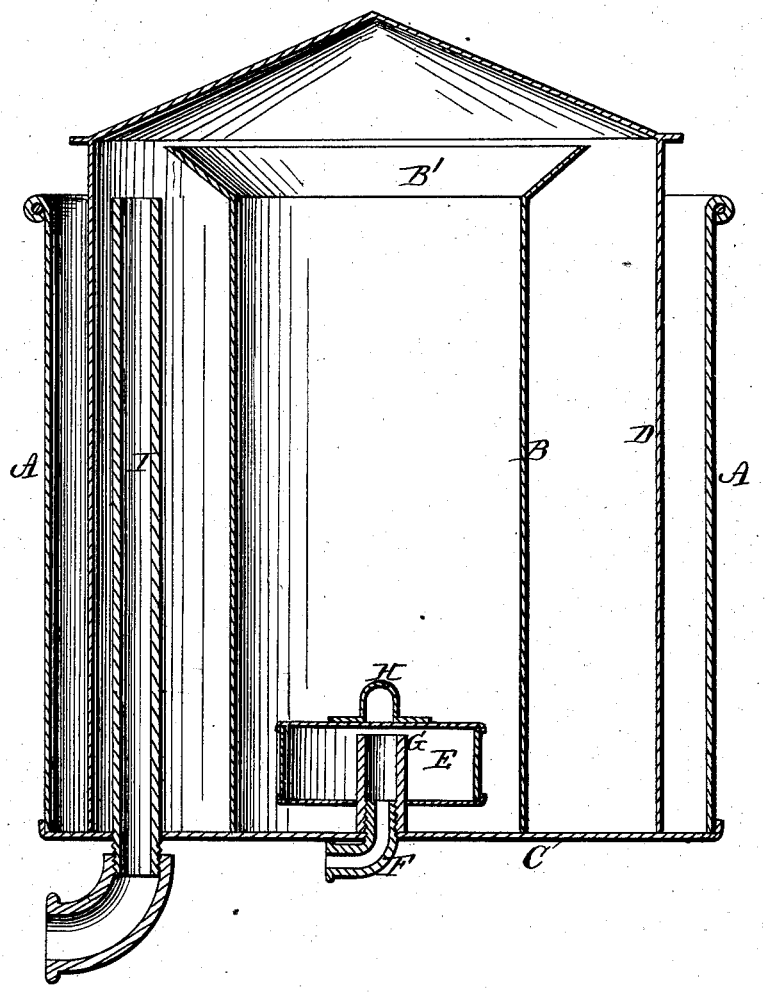
J. R. ALLEN.

Carbureter.

No. 165,050. Patented June 29, 1875.



WITNESSES

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IMPROVEMENT IN CARBURETERS.

Specification forming part of Letters Patent No. **165,050**, dated June 29, 1875; application filed May 31, 1875.

To all whom it may concern:

Be it known that I, JOHN R. ALLEN, of Pittsburg, in the county of Allegheny and in the State of Pennsylvania, have invented certain new and useful Improvements in Carbureters; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain improvements in apparatus for carbureting air or gas for the purpose of illumination, its object being to thoroughly and uniformly charge the air or gas with the vapor of the hydrocarbon liquids, such as naphtha, benzine, &c., in such manner as to produce, when burnt, a brilliant and steady flame.

My invention consists in an open-mouthed vessel formed of two concentric cylinders united to a common bottom, leaving an annular space between the two for containing water, in which annular space an ordinary gas-holder is set. The inner cylinder is constructed with a flaring mouth, and forms the carbureting-chamber of the apparatus, as fully hereinafter set forth.

The drawing represents a sectional view of my improved carbureter.

The letters A and B represent two concentric cylinders, of sheet metal or other suitable material, securely attached to the bottom C. The cylinder B is constructed somewhat less in diameter than the cylinder A, so as to leave an annular chamber or space between the walls of the two, in which is set, mouth downward, an ordinary gas-holder, D, the annular space being filled, or partly filled, with water, to seal the mouth of the gas-holder. The inner cylinder B is constructed with a flaring mouth, B′, the object of which is to prevent any hydrocarbon liquid from being carried over into the annular chamber between the two cylinders, and thus prevents waste. Near the bottom of the inner chamber is arranged a box or chamber, E, of cylindrical or other suitable shape, having a foraminous or perforated bottom. Said box is secured to the end of the air or gas supply-tube F, which enters at the center of the apparatus, projecting upward therein, and being provided with a screw-thread, upon which the lower end of the tube G, which passes up through the bottom of the box E, may be secured. Said tube is rigidly attached to the bottom of the box, and projects into the same, terminating near its top, serving to hold the box in proper position, and also to distribute the air or gas upon the top of the box, by which it will be deflected and thrown downward uniformly through the perforations and the hydrocarbon liquid contained in the inner chamber of the apparatus. To the top of the box E is attached a handle, H, by means of which it can be secured in the apparatus or removed at pleasure.

The air-supply pipe F extends upward on the outside to a height above the level of the hydrocarbon liquid in the inner chamber of the apparatus, and is connected with any suitable blast apparatus or gas-holder.

Said pipe may also serve to introduce the hydrocarbon liquid to the apparatus, in which case it is provided with a funnel and stop-cock at its upper end, the blast or gas pipe being tapped into its side below said funnel.

This will be found the most convenient arrangement for filling or charging the carbureter with hydrocarbon liquid, although it may be dispensed with and the hydrocarbon introduced by removing the gas-holder.

The exit or escape pipe for the carbureted air or gas is represented by the letter I, and extends downward from the top, or a point near the top, of the outer cylinder, through the bottom of the apparatus, and is connected with the service-pipes leading to the burners.

The inner chamber, or carbureting-chamber, being surrounded with water with which the annular chamber is filled, will be thereby rendered safe against fire, and all danger of explosions avoided.

The operation of the apparatus will be fully understood without further explanation.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The carbureting-chamber B, provided with an open flaring mouth, B′, to prevent the escape of hydrocarbon liquid, in combination with outer chamber A, forming an intervening annular water-space, as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of May, 1875.

JOHN R. ALLEN.

Witnesses:

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C. L. EVERT.